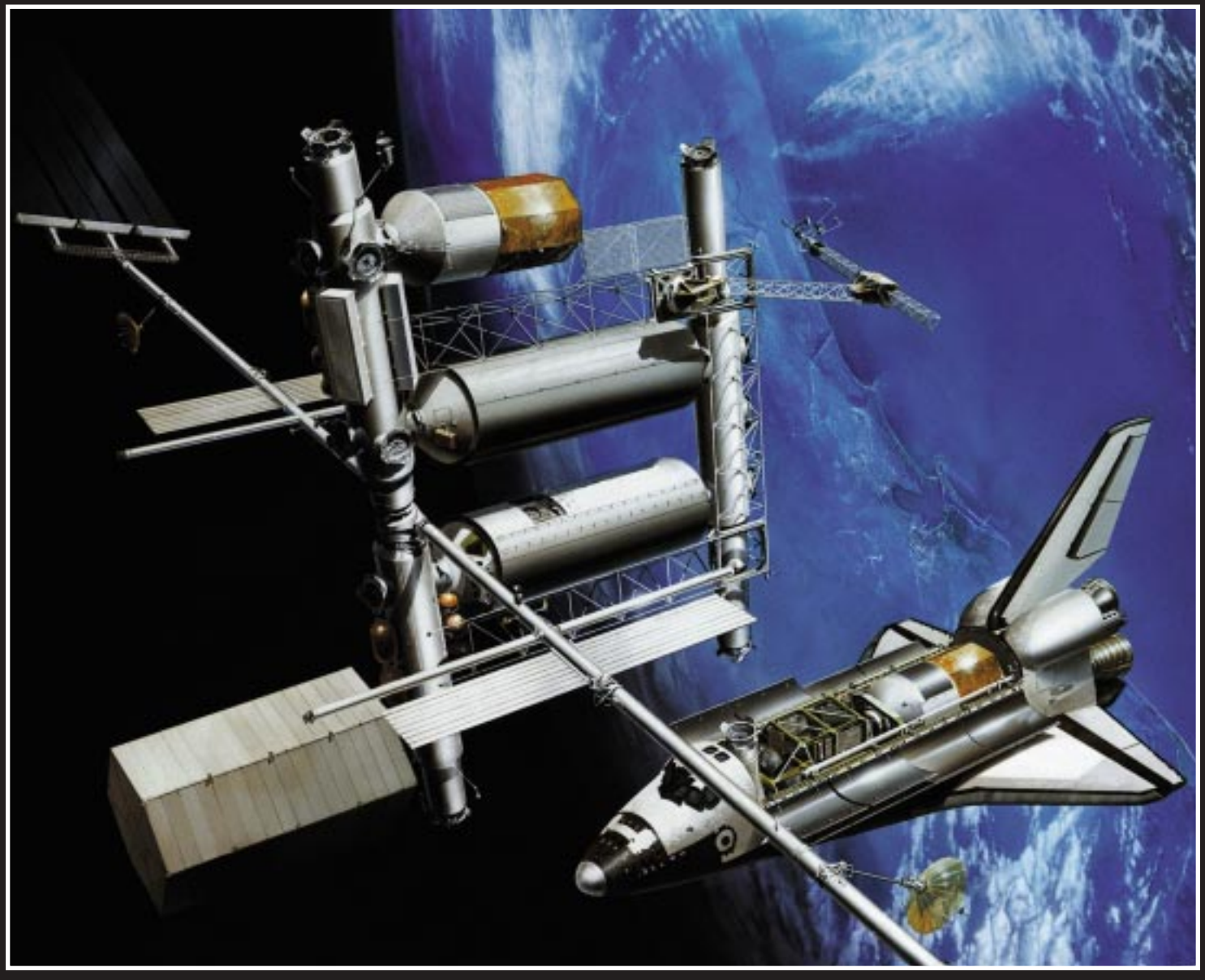
Not Just for NASA

Problem Solving Like You've Never Seen Before



Maybe you don't work for NASA. Maybe you're not a scientist or an engineer. These courses can still help you set direction for your projects and discover new ways to meet your goals. In addition, you'll explore creative tools and find new ways of working with people.

NASA uses these courses in training its People in Creative Approaches to Solving Problems. And so can you.

Understanding Space takes a fresh look at space missions and systems by emphasizing a process-oriented approach for creating missions to meet broad, often poorly defined objectives. It compiles and builds on the knowledge of over 70 industry and Government professionals who examined all aspects of space mission design and space system design. The course is packed with the wisdom that the space industry has gained over the last 40 years in space.

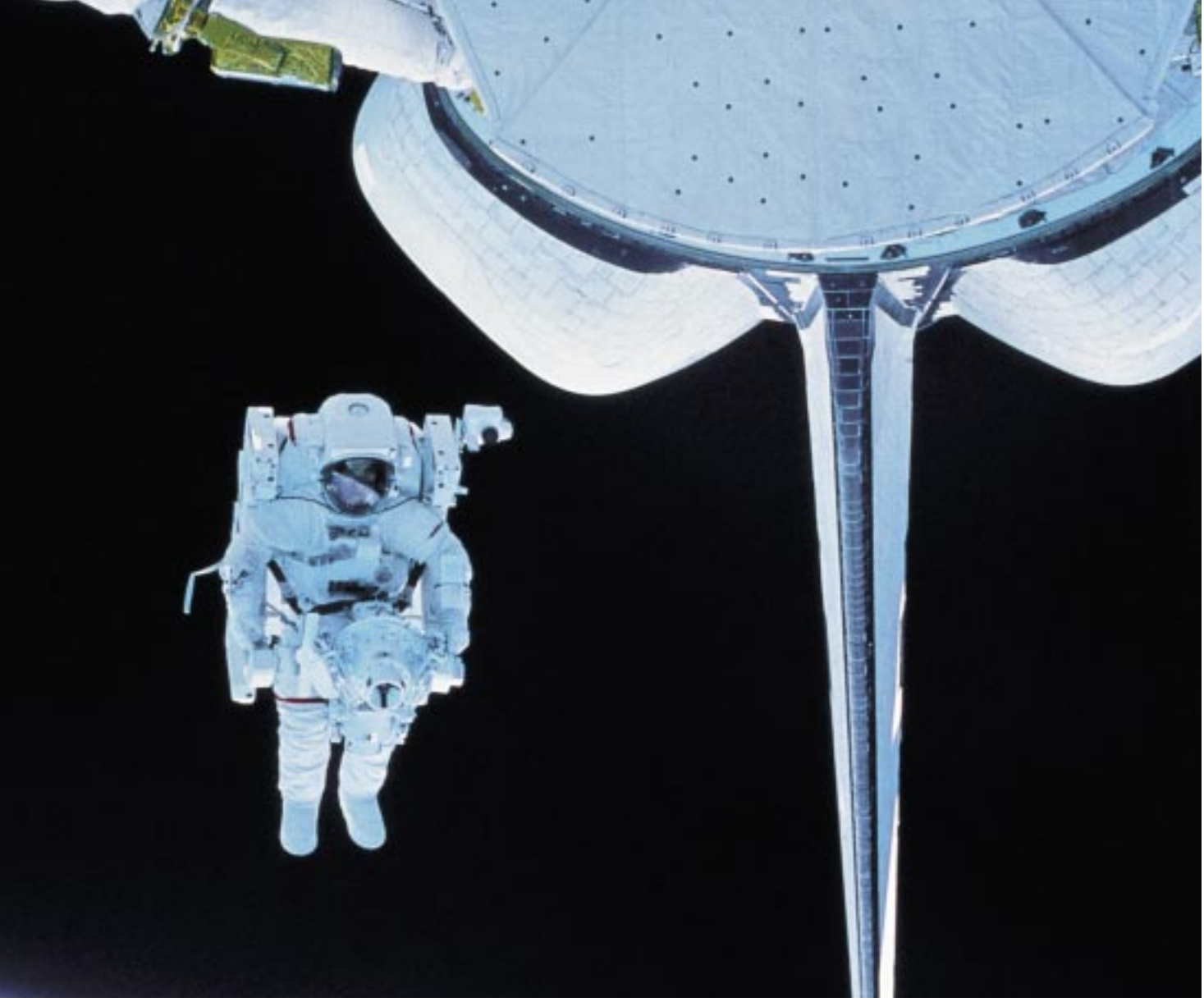
Understanding Space emphasizes techniques to translate space mission objectives, requirements, and constraints into viable and cost-effective concepts. Discussions of spacecraft design presents practical approaches and tools for analyzing and designing space segment support to be used for space missions Topics covered include architectures and configurations, payloads, and vehicle subsystems. Presentations on mission operations describe the functions to be performed, define and evaluate key issues, help develop an appropriate operations concept, and assess the complexity and cost of operations. Special emphasis is placed on describing the interrelationships and trade-offs among system design and mission operations that must occur during the early stages of planning to deliver effective systems. This is a ***hands-on course*** that focuses on helping you apply the information and processes presented once you return to your job.

This two-day course is designed for those interested in the overall big picture of space systems, including *but not limited to* a variety of professionals who must interact with one another to produce cost-effective space missions and may not have a complete and current understanding of the space arena. This includes *managers* of all types, *engineers, designers, analysts, operators* and *users* of space systems who need a "currency check" on space or who are looking for a new model to apply to their own field.

Understanding Space is particularly suited for, but is in no way limited to, people who deal with space-related issues and need a better understanding of the big picture and what is and is not possible. This includes accountants, administrators, quality assurance, and contract specialists.

Coaches of the ***Hands-on Design Experience*** provide participants with a credible, real-life mission objective and divide them into competing groups to conceptually design a mission and systems to meet the objectives at an acceptable life-cycle cost. Each group uses a structured system engineering approach (that is very useful in many disciplines) to develop their mission concept and supporting space mission architecture to meet the stated mission objectives.

For managers who are looking for a new model to apply to their own field.



Participants are coached in interpersonal skills, systematic approaches, and space-related technologies that help them complete their task. Many participants take new skills back to their day-to-day jobs that help them be more productive contributors to their organizations.

Each group develops a credible design, performs a life-cycle cost estimate and identifies critical requirements and system drivers for their concept. The product of the design exercise is a one-hour proposal presentation where the participants are expected to defend their design decisions.

This three to five day exercise provides an integrated view of space mission design and operations--from conceptual design and requirements definition, through spacecraft design, development, test, and launch to development of mission operations concepts and ground infrastructure capabilities. It emphasizes that space mission concepts and architectures should be compatible and provide customers with what they need in the most cost-effective manner possible.

The *Hands-on Design Experience* is especially suited to individuals and organizations that need to deal with large and complex technical problems that require creative solutions.

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Other courses include:

Human Spaceflight: Mission Analysis and Design
This workshop helps participants improve their technical management and organizational performance in conducting human space missions. This engaging workshop provides an integrated view of crewed space mission design and operations.

Designing Space Missions: An Integrated, Systematic Approach
This engaging "how-to" workshop provides an integrated view of robotic (unmanned) space mission design and operations. Participants are taken from conceptual design and requirements definition through spacecraft design, development and testing, to development of mission operations concepts and ground infrastructure capabilities.

Modeling and Simulation for Space Systems
This course provides a framework for organizing, developing, implementing, and maintaining cost-effective models and simulations to support space mission and system development and operation. It is designed for a variety of participants, including managers and systems engineers involved in all areas of development.

The Space Environment
Technical managers and engineers are given a working understanding of the space environment and its effects on space systems and missions. All elements of the environment are addressed in terms and concepts that are easily applied by technical managers and engineers.